

ATTACHMENT 1

2025 WL 26734

Only the Westlaw citation is currently available.

United States District Court, D. Delaware.

10X GENOMICS, INC. and PRESIDENT AND FELLOWS OF HARVARD COLLEGE, Plaintiffs,

v.

VIZGEN, INC., Defendant.

Case No. 22-cv-595-MFK

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Filed 01/03/2025

MEMORANDUM OPINION AND ORDER

MATTHEW F. KENNELLY United States District Judge

*1 10x Genomics, Inc. and the President and Fellows of Harvard College have sued Vizgen, Inc., a biotechnology company, for patent infringement. Vizgen has asserted numerous counterclaims in response. Both parties have moved for summary judgment. Given the breadth of these combined motions, the Court will begin by addressing Vizgen's motion for summary judgment before turning to 10x and Harvard's motions.

For the reasons discussed below, the Court denies Vizgen's motion in full, with the exception of its motion to exclude the testimony of Harvard's expert, Professor Rebecca Eisenberg. The Court elects to defer ruling on that particular motion and will decide it after hearing further argument at the final pretrial conference. The Court grants 10x's motion for summary judgment except with respect to part of Count 4 of the counterclaim as noted below. The Court grants Harvard's motion for summary judgment with respect to Counts 17, 19, and 20 of the counterclaim, but denies the motion on Counts 1, 5, and 21.

Background

The Court assumes familiarity with this case's factual and procedural background, which the Court discussed in its prior written opinions. See *10x Genomics, Inc. v. Vizgen, Inc.*, 654 F. Supp. 3d 310 (D. Del. 2023); *10x Genomics, Inc. v. Vizgen, Inc.*, 681 F. Supp. 3d 252 (D. Del. 2023). The following background is taken from the Court's claim construction order and the parties' briefing on the present motions.

10x and Vizgen are both biotechnology research companies specializing in *in situ* single cell spatial transcriptomics (SST). Both companies have licensing agreements with Harvard to use certain patents and have developed and commercialized highly complex genome sequencing technologies. 10x's platform is called Xenium In Situ, and Vizgen's is called MERSCOPE. Vizgen's MERSCOPE is based on its MERFISH technology, which was developed by Harvard professor Dr. Xiaowei Zhuang and her colleagues. 10x's Xenium stems in part from its acquisition of ReadCoor, Inc., which had nascent SST products developed from FISSEQ (fluorescent in situ sequencing) technology.

The case began with infringement claims regarding five patents (collectively, the Church patents): U.S. Patent Nos. 11,021,737 ('737 Patent), 11,293,051 ('051 Patent), 11,293,052 ('052 Patent), 11,549,136 ('136 Patent), and 11,299,767 ('767 Patent). 10x asserts that four of these patents "build on preexisting analyte-binding art with a new method of indirect multistep fluorescent detection of known analytes using barcodes detected over time." Pls.' Opp. to Vizgen's Mot. for Summ. J. at 6. These four

patents—the ‘737, ‘051, ‘052, and ‘136 patents—are referred to as the “TOSS patents,” which stands for “temporal order of signal signatures.” *Id.*

The events that resulted in this suit span back to 2008, when the National Institutes of Health (NIH) announced a funding program for genomics research. Harvard and one of its researchers, Dr. George Church, applied for this funding. In their application (Grant Application), Harvard and Church stated that they “will work with the Harvard Medical School Office of Technology Licensing to obtain open and non-exclusive licenses that will encourage commercialization of these innovations” and “will pursue open and non-exclusive licensing agreements that encourage innovations to be made widely available to researchers and commercial entities.” Pl. 10x's Opening Br. in Supp. of Mot. for Summ. J., Ex. 62 at 687, 689. The NIH accepted the Grant Application and awarded Harvard and Church nearly \$20 million in federal funding, conditioning the award on the above-mentioned statements and other similar statements made in the Grant Application. *See id.*, Ex. 1 at 10–11. Via the research funded by the grant, Church and his team were able to successfully obtain a series of patents, including the Church patents asserted by 10x against Vizgen in this case.

*2 In 2016, Church co-founded ReadCoor, Inc., a Massachusetts-based company. Though 10x (which acquired ReadCoor) and Vizgen disagree about how actively Church was involved with ReadCoor's operation, Vizgen has produced evidence that Church owned twenty-five percent of ReadCoor's stock and was described as a “co-founder” of ReadCoor, was consulted regarding partnerships, and played a role in Harvard's licensing of the Church patents to ReadCoor. *See, e.g.*, Vizgen's Omnibus Answering Br. in Opp. to Mot. for Summ. J., Ex. 97; *id.*, Ex. 11; *id.*, Ex. 42. Jessica Duda, the member of Harvard's Office of Technology Development (OTD) then responsible for overseeing the licensing of the Church patent portfolio, testified that both Church and Rich Terry, ReadCoor's CEO, directed her to exclusively license the Church patents to ReadCoor. *See id.*, Ex. 11 at 17:19–19:3.

In September 2016, Harvard granted ReadCoor “an exclusive, worldwide, royalty-bearing license” to numerous Harvard-owned patents, with four enumerated fields (Field A), to commercialize the FISSEQ technology developed by Church. Viz-SOF ¶ 7; *see also* Opening Br. in Supp. of Harvard's Mot. for Summ. J., Ex. 35 § 2.1 (“License Grant” section of the Harvard/ReadCoor license agreement). As indicated earlier, “FISSEQ” stands for “fluorescent in situ sequencing”; it “enables sequencing across multiple omics formats (genomics, transcriptomics and proteomics) without disruption to cell structure or loss of spatial data via the detection of fluorescent markers indicating specific molecules directly within tissue,” i.e., in situ. Pl. 10x's Opening Br. in Supp. of Mot. for Summ. J., Ex. 30.

Field A was limited to “three-dimensional in situ sequencing.” Viz-SOF ¶ 6. In 2018, ReadCoor sought to broaden its license. Following negotiations, Harvard agreed to removing the words “three dimensional” from the field definition but rejected other amendments proposed by ReadCoor.

In 2020, ReadCoor again sought to broaden the field definition in its license. ReadCoor was in the process of being acquired by 10x Genomics, Inc., and a condition of the acquisition was an expansion of ReadCoor's current field definition. 10x SOF ¶¶ 6–9. Following an initial rejection of the proposed amendment and a series of negotiations, Harvard ultimately accepted the amendment in the exact language ReadCoor proposed, expanding ReadCoor's field definition to include “sequencing, sequence detection, analysis, and/or nucleic acid amplification, for any and all purposes.”

Meanwhile, in 2019, Dr. Xiaowei Zhuang, a Harvard professor, co-founded Vizgen to commercialize proprietary MERFISH technology that she had developed and patented on Harvard's behalf. On September 26, 2019, Harvard and Vizgen entered into an agreement in which Vizgen was granted an exclusive license to eighteen of Harvard's patents and a non-exclusive license to five additional Harvard patents. In the license agreement with Vizgen, Harvard represented that the Vizgen license “is not in conflict with any existing intellectual property agreement with a Third Party under which Harvard is bound.” Opening Br. in Supp. of Harvard's Mot. for Summ. J., Ex. 17 § 8.2.

Though this representation was true at the time, the 2020 amendment to the ReadCoor license allegedly put the ReadCoor and Vizgen licenses in conflict. In 2022, 10x and Harvard initiated this suit against Vizgen alleging infringement of the Church patents.

Discussion

Summary judgment is appropriate if the moving party “shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” *Fed. R. Civ. P. 56(a)*. A dispute is genuine when “the evidence is such that a reasonable jury could return a verdict for the nonmoving party.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). At the summary judgment stage, “the court must view the facts in the light most favorable to the nonmoving party and draw all inferences in that party's favor.” *ArcelorMittal Atlantique et Lorraine v. AK Steel Corp.*, 908 F.3d 1267, 1273 (Fed. Cir. 2018) (quoting *Gonzalez v. Sec'y of Dep't of Homeland Sec.*, 678 F.3d 254, 257 (3d Cir. 2012)).

A. Vizgen's motion

*3 The Court will first address Vizgen's motion for summary judgment with respect to 10x and Harvard's patent infringement claims. Vizgen seeks summary judgment on the following points: (1) the availability of damages based on Vizgen's sales of MERSCOPE outside the U.S.; (2) the availability of damages based on sales of MERSCOPE to non-profit entities; and (3) the invalidity of the '737 patent, '051 patent, '052 patent, and '136 patent (collectively the TOSS Patents) for lack of enablement and written description under 35 U.S.C. § 112.

Vizgen also moves to exclude the opinions of two of 10x's experts, technical expert Dr. John Quackenbush and damages expert Julie Davis, and one of Harvard's experts, Harvard Professor Rebecca Eisenberg.

The Court will address each of these points in turn.

1. Damages

a. Foreign sales

To obtain reasonable royalty damages based on foreign sales, Vizgen must “show why that foreign conduct increases the value of the domestic infringement itself—because, *e.g.*, the domestic infringement enables and is needed to enable otherwise-unavailable profits from conduct abroad.” *Brumfield v. IBG LLC*, 97 F.4th 854, 877 (Fed. Cir. 2024).

Vizgen contends that 10x's attempt to include Vizgen's foreign sales in its reasonable royalty calculation should be rejected. To support this contention, Vizgen challenges the opinion of 10x's damages expert Julie Davis, arguing that Davis does not “establish causation between Vizgen's testing or [Proof of Principle] studies in the United States and foreign sales of MERSCOPE®.” Vizgen's Opening Br. in Supp. of Mot. for Summ. J. at 1. 10x concedes that Davis is not rendering an opinion on causation. Rather, 10x contends, it will establish causation via other evidence, and Davis will take this as a given in making her damages calculation. *See* Pls.' Opp. to Vizgen's Mot. for Summ. J. at 1 (“The causal connection between Vizgen's infringement and its foreign sales is shown through non-expert evidence”).

10x asserts that Vizgen's domestic infringement enables otherwise-unavailable profits from foreign sales because Vizgen's U.S.-based testing and lab services program, which allegedly infringes on 10x's patents, “generate[s] data and images for publications, collaborations, and direct marketing,” which 10x alleges are “designed to drive Vizgen's foreign sales.” *Id.* at 2. To support this, 10x points to statements made by Vizgen's Senior Vice President of Global Sales, Dale Levitzke. Specifically, Levitzke confirmed during his deposition that a “bulk of the testing of the MERSCOPE platform to bring it to the market occur[red] in the United States,” that Vizgen offers lab services exclusively in the United States which are used to “generate data” and for “collaborations” with customers, and that, generally, “data quality,” “data interpretation,” and “data analysis” are part of

Vizgen's sales strategies for certain industries. *Id.*, Ex. A at 21:16–19, 50:1–18, 51:18–24, 63:12–64:10. Levitzke further testified that Vizgen offers proof of concept services, which involve “receiv[ing] customer samples in-house and generat[ing] data for them,” which he claimed were historically responsible for as much as “30 percent” of Vizgen's MERSCOPE sales. *Id.*, Ex. A at 37:12–38:10.

In short, the answer to Vizgen's challenge to Davis on the causation question is that 10x is not relying on Davis's testimony to establish causation, but merely to support the calculation of foreign damages assuming causation is established. Should Vizgen wish to challenge the reliability of Davis's calculations, the appropriate place to do so is during cross examination at trial. See *Walker v. Gordon*, 46 F. App'x 691, 695 (3d Cir. 2002) (“Determinations regarding the weight to be accorded, and the sufficiency of, the evidence relied upon by the proffered expert, are within the sole province of the jury.”).

*4 The same is true, of course, of the causation evidence proffered by 10x; Vizgen is free to attack its veracity and sufficiency at trial. At this point, however, the Court is addressing only a challenge to the testimony of Davis. The evidence cited by 10x, along with Davis's damages-calculation testimony, is sufficient to permit a reasonable jury to find that Vizgen's domestic infringement enables otherwise-unavailable profits from foreign sales. Accordingly, the Court denies Vizgen's motion seeking summary judgment on the availability of reasonable royalty damages based on Vizgen's sales of MERSCOPE outside the U.S.

b. Non-profit sales

Vizgen also seeks summary judgment on the question of the availability of damages based on sales of MERSCOPE to non-profit and academic entities. 10x alleges that Vizgen is liable for damages based on these sales on a theory of indirect infringement under 35 U.S.C. §§ 271(b) and 271(c), which respectively establish liability for

[w]hoever actively induces infringement of a patent [and] [w]hoever offers to sell or sells within the United States ... a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent.

35 U.S.C. § 271(b)–(c).

Liability of an entity like Vizgen for induced or contributory infringement requires, among other things, proof of direct infringement by the entity allegedly induced. See *Limelight Networks, Inc. v. Akami Techs., Inc.*, 572 U.S. 915, 921 (2014). Vizgen argues that non-commercial users like non-profit entities and academics cannot be direct infringers, based on what the parties refer to as a “retained rights” provision in 10x's license on the asserted patents. This term provides that “Harvard retains the right, for itself and for other not-for-profit research organizations and their *bona fide* collaborators, to practice the Patent Rights and Co-owned HU5578 Patent Rights within the scope of the license granted above, solely for noncommercial research, educational and scholarly purposes.” Vizgen's Opening Br. in Supp. of Mot. for Summ. J., Ex. 7 at 415–16. Accordingly, Vizgen contends, “sales of MERSCOPE instruments and consumable to non-profits do not constitute direct infringement because *sales* of products capable of performing the patented methods do not constitute *direct* infringement of method claims.” *Id.* at 4–5. Vizgen further contends that such sales “do not constitute *indirect* infringement because those customers’ use is covered by” the retained rights provision. *Id.* at 5.

10x and Harvard—the parties to the license in question—counter by asserting that the retained rights provision “is a narrow carve-out solely intended to enable Harvard to permit non-profit researchers to practice Harvard-owned patents only for non-commercial research activity, including, for example, building a device for internal use.” Pls.’ Opp. to Vizgen's Mot. for Summ. J. at 3. 10x and Harvard contend that Vizgen's interpretation of the retained rights provision would render the license illusory because “any commercial competitor could freely sell to most customers while Harvard collects no royalties, entirely frustrating

the purpose of the exclusive license to incentivize commercialization of products.” *Id.* 10x and Harvard argue that their mutual understanding of the license's retained rights provision should control because they are the parties to the license.

The Third Circuit has addressed a situation like this in which a non-party to an agreement challenges the parties’ mutual understanding of the agreement's terms. See *Sunbury Textile Mills, Inc. v. Comm’r of Internal Revenue*, 585 F.2d 1190, 1192 (3d Cir. 1978). Applying Massachusetts contract law, the court in *Sunbury* concluded that

*5 where, as here, there is no dispute between the contracting parties over the meaning of the terms, extrinsic evidence should not be considered in light of the parol evidence rule as contradicting the integrated agreement, but as providing an explanation of the parties’ contractual understanding. Their harmonious recital of what these words mean is conclusive.

Id. at 1196.

10x and Harvard agree that the retained rights provision in the Harvard/ReadCoor license is meant to “enable Harvard to permit non-profit researchers to practice Harvard-owned patents only for non-commercial research activity.” Pls.’ Opp. to Vizgen’s Mot. for Summ. J. at 3. This mutual understanding controls under Massachusetts law (which governs interpretation of the license), but even if it did not, Vizgen’s interpretation of the retained rights provision is unsupported by extrinsic evidence. Vizgen pays royalties to Harvard for sales of patented products “based on the requirement that royalties are owed where there is an infringement of a valid claim” of one or more of the relevant patents. *Id.*, Ex. B at 63:12–14. Vizgen CEO Terry Lo stated that he was “not aware of any situation” in which “Vizgen ever declin[ed] to pay Harvard a royalty for any not-for-profit research customer.” *Id.*, Ex. B at 66:6–13.

Therefore, based on 10x and Harvard’s mutual understanding, supported by the extrinsic evidence of Vizgen’s payment of royalties for sales of MERSCOPE to not-for-profit customers, the Court finds that there is a genuine dispute regarding the retained rights provision such that a reasonable jury could award damages for Vizgen’s alleged infringement via its sales of MERSCOPE to non-profits. Accordingly, Vizgen is not entitled to summary judgment on the question of the availability of damages for sales of MERSCOPE to non-profit and academic entities.

2. Patent invalidity

“Because patents are presumed valid, ‘a moving party seeking to invalidate a patent at summary judgment must submit such clear and convincing evidence of facts underlying invalidity that no reasonable jury could find otherwise.’ ” *TriMed, Inc. v. Stryker Corp.*, 608 F.3d 1333, 1340 (Fed. Cir. 2010) (quoting *SRAM Corp. v. AD-II Eng’g, Inc.*, 465 F.3d 1351, 1357 (Fed. Cir. 2006)).

A valid patent must include a specification that contains

a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

35 U.S.C. § 112(a). The Federal Circuit has interpreted section 112(a) as containing both a “written description” requirement and an “enablement” requirement. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1344 (Fed. Cir. 2010). Vizgen argues that the patents-in-suit fail both requirements.

a. Lack of enablement

The Supreme Court has stated that “the specification must enable the full scope of the invention as defined by its claims[,]” allowing for “a reasonable amount of experimentation.” *Amgen Inc. v. Sanofi*, 598 U.S. 594, 610–12 (2023). Put differently, a patent specification must “teach those in the art to make and use the invention without undue experimentation.” *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). “Whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations.” *Id.* Courts consider eight factors—the *Wands* factors—when assessing whether a patent meets the enablement requirement. These factors are: “(1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skills of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.” *Id.*

*6 Vizgen advances several arguments to support its contention that the common specification in the TOSS Patents is invalid due to a lack of enablement, though not in the express terms of the *Wands* factors. To map these arguments onto the *Wands* factors listed above, Vizgen asserts lack of enablement due to the breadth of the claims, the amount of direction or guidance presented, and the presence or absence of working examples (though much of Vizgen's argument combines these factors, rather than addressing them individually).

Vizgen first challenges the breadth of the TOSS Patents. The TOSS Patents cover a broad range of molecular “analytes,” a term the Court has construed to mean “the molecule detected, identified or measured by binding of a detection reagent whose probe reagent(s) recognize it (i.e., are specific binding partners thereto).” Dkt. no. 327 at 23. The common specifications of these patents state that an “analyte” can be a “nucleic acid, peptide, a polypeptide/protein (e.g., a bacterial or viral protein or an antibody), a lipid, a carbohydrate, a glycoprotein, a glycolipid, a small molecule, an organic monomer, sugar, peptidoglycan, a cell, a virus or a drug.” *See, e.g.*, Vizgen's Opening Br. in Supp. of Mot. for Summ. J., Ex. 13 at 59:48–52 (showing the common specification for the '051 Patent). The TOSS Patents all recite identifying an “analyte” in a “cell or tissue sample.” *See, e.g., id.*, Ex. 13 at 83:17.

Next, Vizgen contends that the amount of direction or guidance presented in the TOSS patents is insufficient to enable the breadth of what they cover. Vizgen asserts that the TOSS Patents are “not enabled for the simple reason that the TOSS Patents do not disclose how that detection occurs” for each of these types of analytes. *Id.* at 6–7. According to Vizgen, the common specification provides only one working example, which, Vizgen contends, does not enable the full scope of analytes listed above. *See Amgen*, 598 U.S. at 610 (“If a patent claims an entire class of processes, machines, manufactures, or compositions of matter, the patent's specification must enable a person skilled in the art to make and use the entire class.”). Vizgen further asserts that the common specifications lack sufficient guidance to teach “high multiplexed detection of analytes in a cell or tissue sample” like that achieved by Vizgen's MERSCOPE. Vizgen's Opening Br. in Supp. of Mot. for Summ. J. at 8.

Finally, Vizgen contends that the TOSS Patents are not enabled due to the insufficiency of working examples. The TOSS Patents provide a single working example that identifies one analyte: “an extracellular analyte of a yeast cell.” *Id.*, Ex. 16 ¶ 265 (expert report of Rahul Satija). And Vizgen's expert, Dr. Michael Metzker, asserts that “the one experiment described in the specification relates to the identification of an extracellular analyte of a yeast cell, i.e., not in a cell and not in a tissue sample.” Pls.' Opp. to Vizgen's Mot. for Summ. J., Ex. G ¶ 924 (expert report of Dr. Michael Metzker). Therefore, according to Metzker, this example does not meet the requirements of the asserted claims, because the probe reagent binds to the outside of the yeast cell and does not enter the cell itself. *See id.*, Ex. J at 270:3–271:23.

Vizgen has limited its motion to addressing the *Wands* factors. Though it may not be necessary to explore each *Wands* factor in depth, *Wands* makes clear that the eight-factor test involves balancing of the relevant factors. See *Wands*, 858 F.2d at 737 (noting that the test for enablement is “not merely quantitative” and that the eight-factor test involves “weighing many factual considerations”). Therefore, though Vizgen only focuses on certain *Wands* factors to support its motion for summary judgment, it is necessary for the Court to consider additional *Wands* factors to properly assess whether Vizgen is entitled to summary judgment on this basis.

*7 Regarding the breadth of the scope of analytes, 10x's expert Rahul Satija counters that the asserted claims are not overly broad because they “are directed to methods of detection of analytes in a cell or tissue sample,” and “[a] POSA would be aware that there are inherent limits on the types of analytes present in a cell or tissue sample.” Satija Decl. ¶ 221. Satija goes on to state that “[a] POSA would understand the scope of proteins and other molecules that would be considered ‘analytes’ within the Court's construction.” *Id.* ¶ 222.

Regarding the relative level of skill of those in the art, both Satija and Metzker agree that the level of skill is high, with at least a relevant Ph.D. and two years of experience. See *id.* ¶ 245. Satija contends that a POSA with this level of skill would be able “to perform the relevant techniques” taught in the patent “to detect [an] analyte” because “there are only a finite number of possible analytes and a POSA would be familiar with the prior art techniques of *in situ* detection ... to apply reaction conditions with a reasonable amount of experimentation.” *Id.* ¶ 244. Vizgen does not address this *Wands* factor in its motion.

Considering this level of skill, Satija asserts that the guidance in the specification is sufficient to “enable one skilled in the art with relevant knowledge and training in the field to practice the full scope of the invention.” *Id.* ¶ 251. Satija explains that “a POSA would have understood the scope of analytes and their specific binding probe partners” and “would be aware that for each type of analyte, there are known, common structural features that define probe reagents.” *Id.* Therefore, according to Satija, “[a] POSA would be able to make and use the full scope of the invention based on the extensive disclosures and a POSA's own individual knowledge in the art.” *Id.* ¶ 253.

Finally, regarding the presence or absence of working examples, Satija disagrees with Metzker's characterization of the working example provided in the common specifications. Satija asserts that “[a] POSA would not agree with Dr. Metzker's conclusion that an *in situ* experiment requires a probe reagent to enter an individual cell” and that “[a] POSA would recognize that the example experiment provided in the specification is performed on a sample of yeast cells, and therefore demonstrates the claimed invention.” *Id.* ¶ 267.

The Court finds that Vizgen has not met its burden to establish, on summary judgment, the absence of genuine disputes of material fact and that clear and convincing evidence demonstrates lack of enablement. As an initial matter, a reasonable factfinder could determine that Vizgen overstates the need to have additional working examples. Though some patents may require more than one working example to be properly enabled under the meaning of the statute, a single working example may be sufficient so long as one skilled in the art can make and use the full scope of the claimed invention without undue experimentation. See *Wands*, 858 F.2d at 736–37 (finding that a determination of enablement is “reached by weighing many factual considerations” and “must be decided on the facts of the particular case”); see also *Bayer HealthCare LLC v. Baxalta Inc.*, 989 F.3d 964, 982 (Fed. Cir. 2021) (“[T]he specification need not include a working example of every possible embodiment to enable the full scope of the claims.”). As Satija asserts in his expert report, “[t]he specification clearly describes how a temporal signature can be used to identify detection reagents through sequential hybridization and detection of optical signals in a cell sample,” and “[a] POSA would recognize that this experiment [identifying an extracellular analyte of a yeast cell] represents a working example of the claimed invention.” Satija Decl. ¶ 266. As for Metzker's argument that the working example only shows the identification of an extracellular analyte, not an analyte in a cell or tissue sample, i.e., *in situ*, Satija's expert report provides an alternative justification:

*8 A POSA would not agree with Dr. Metzker's conclusion that an *in situ* experiment requires a probe reagent to enter an individual cell. Instead, a POSA would understand that the phrase ‘in a cell or tissue sample’ requires the *in situ* analysis to be performed within a group of cells or a piece of biological tissue.

Id. ¶ 267.

Based on the opposing expert analyses, the Court concludes that there are genuine disputes of material fact that preclude granting summary judgment on lack of enablement.

b. Written description

A patent specification must contain a written description that “clearly allow[s] persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.” *Ariad*, 598 F.3d at 1351 (citation omitted). The sufficiency of a written description is determined by assessing “whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter.” *Id.* This is an “objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.” *Id.* Accordingly, the written description requirement “varies with the nature and scope of the invention at issue, and with the scientific and technologic knowledge already in existence.” *Juno Therapeutics, Inc. v. Kite Pharma, Inc.*, 10 F.4th 1330, 1335 (Fed. Cir. 2021).

Vizgen contends that the TOSS Patents “are broadly directed to a functional genus: identification of an ‘analyte’ based on its binding to a ‘detection reagent.’” Vizgen’s Opening Br. in Supp. of Mot. for Summ. J. at 9. A “sufficient description of a genus requires the disclosure of either a representative number of species falling within the scope of the genus or structural features common to the members of the genus.” *Ariad*, 598 F.3d at 1350. Vizgen asserts that the TOSS Patents lack a valid written description because “the Common Specification simply lacks the required disclosure.” Vizgen’s Opening Br. in Supp. of Mot. for Summ. J. at 10.

10x, by contrast, contends that the TOSS Patents do not describe a functional genus but rather a “novel temporal detection method.” Pls.’ Opp. to Vizgen’s Mot. for Summ. J. at 14. Therefore, 10x contends, “[t]he key issue is whether a POSA would recognize that the inventor possessed the concept of determining the location, as well as the identity, of an analyte.” Satija Expert Report ¶ 207. Satija’s expert report outlines how the TOSS Patents adequately describe this detection method: “[A] POSA would understand that in the context of the in situ analysis, the resulting image data not only captures the identity of a signal, but also measures its spatial position which can be used to pinpoint the analyte’s location.” *Id.* ¶ 207; *see also id.* ¶¶ 204–13. Satija’s report goes on to explain that the specification “explicitly notes that the reagents and methods can be used for immunohistochemistry and in situ hybridization ... which a POSA would understand represent in situ approaches that are primarily focused on the ability to identify the spatial location of target analytes.” *Id.* ¶ 207. Further, “the specification describes that the probe reagents of the detection reagents can bind to the target analytes, e.g., biomarkers for specific diseases or disorders, and detection of the nucleic acid labels using the methods described herein can then locate the target analytes.” *Id.* ¶ 207 (citation and quotation marks omitted). If a finder of fact determined Satija’s testimony to be well-founded and persuasive, it could legitimately find in 10x’s favor on Vizgen’s written description defense.

*9 Vizgen has offered a countervailing expert, Dr. Metzker, who essentially disagrees with Satija on each of these points. But Vizgen has the burden to show by clear and convincing evidence that the TOSS Patents are invalid due to a lack of written description. Determination of the issue basically turns on which party’s expert is more persuasive. Under the circumstances, the Court concludes that there are genuine disputes of fact that are material to determination of the written description issue. Summary judgment in Vizgen’s favor is therefore inappropriate.

3. Expert testimony

To be admissible, an expert’s testimony must be helpful to the trier of fact and must “rest[] on a reliable foundation and [be] relevant to the task at hand.” *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 597 (1992). Similarly, under Federal Rule of Evidence 702, expert testimony must meet three requirements to be admissible: (1) the witness must be qualified to give such testimony; (2) the testimony must be reliable; and (3) the testimony must be relevant and assist the trier of fact. *See Fed. R.*

Evid. 702; *Schneider ex rel. Est. of Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003) (“We have explained that Rule 702 embodies a trilogy of restrictions on expert testimony: qualification, reliability and fit.”).

a. Dr. Quackenbush

Vizgen first moves to exclude the testimony of 10x's infringement expert, Dr. Quackenbush, as it relates to certain damages issues. Specifically, Quackenbush renders opinions regarding the relative value of patents in the Harvard/ReadCoor license, which 10x's damages expert, Julie Davis, uses in her apportionment analysis regarding determination of a reasonable royalty. Vizgen contends that Quackenbush's testimony on this point is unreliable because he initially failed to define the scale used to determine the value of the patents in the license. Vizgen also contends that Quackenbush's scale is unreliable and arbitrary “because it is inconsistent with his valuations of the same patents and patent families in the *Prognosis* case,” an earlier related lawsuit brought by 10x against a different entity. Vizgen's Opening Br. in Supp. of Mot. for Summ. J. at 13.

The Court is not persuaded by Vizgen's argument. First, Vizgen's motion regarding Dr. Quackenbush is notably devoid of case law to support its contention that his testimony must be excluded. Instead, Vizgen points to the differences between Dr. Quackenbush's valuation of the patents and patent families here and in the *Prognosis* case. But in *Prognosis*, Quackenbush considered the asserted *Prognosis* patents against certain ReadCoor patents, whereas here he values the ReadCoor patents relative to unasserted ReadCoor patents, including patents that have been issued since his *Prognosis* opinion. Thus there is a legitimate basis—or at least a basis that a factfinder could determine to be legitimate—for his valuations to differ.

Vizgen's point—which amounts to a disagreement with Quackenbush's conclusions—is appropriately a matter for cross examination, presentation of contrary evidence, and argument, not a basis for exclusion of his opinions. See, e.g., *Breidor v. Sears, Roebuck & Co.*, 722 F.2d 1134, 1138–39 (3d Cir. 1983) (“Where there is a logical basis for an expert's opinion testimony, the credibility and weight of that testimony is to be determined by the jury, not the trial judge.”).

b. Julie Davis

Vizgen also moves to exclude the testimony of 10x's damages expert, Julie Davis, regarding determination of a reasonable royalty. “The reasonable royalty theory of damages ... seeks to compensate the patentee not for lost sales caused by the infringement, but for its lost opportunity to obtain a reasonable royalty that the infringer would have been willing to pay if it had been barred from infringing.” *AstraZeneca AB v. Apotex Corp.*, 782 F.3d 1324, 1334 (Fed. Cir. 2015). One “common approach” to calculate a reasonable royalty is “the hypothetical negotiation” approach, which “attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began.” *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009). Vizgen seeks to exclude Davis's opinion regarding this approach. Vizgen also challenges Davis's apportionment theory, asserting that her analysis is flawed because it relies on the allegedly arbitrary opinions of Dr. Quackenbush.

***10** As the Court has already noted above, there is no appropriate basis to exclude Quackenbush's opinions regarding the relative valuation of the patents he has assessed. Thus there is no appropriate basis to preclude Davis from relying on Quackenbush's valuations; again, this is a matter of weight, not admissibility. See *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1321 (Fed. Cir. 2014) (“Experts routinely rely upon other experts hired by the party they represent for expertise outside of their field.”).

After valuing the respective patent families, Davis uses a comparability analysis to determine how the hypothetical negotiation would arrive at a royalty rate for each asserted patent. Vizgen challenges Davis's method as being unreliable, but again, this is a point appropriately addressed via cross examination and presentation of contrary evidence, not exclusion. Accordingly, the Court denies Vizgen's motion to exclude Davis's testimony.

c. Professor Rebecca Eisenberg

Finally, Vizgen moves to exclude the testimony of Professor Rebecca Eisenberg, an expert witness offered by Harvard on various issues relating to Vizgen's counterclaims. The Court wants to hear further argument regarding the motion and therefore defers it to the final pretrial conference. The Court notes in this regard that nothing in the parties' summary judgment motions turns on whether Eisenberg's proffered testimony is admissible.

The Court also notes that the parties' briefs relating to Eisenberg's testimony indicate that her testimony is offered, in part, to rebut an expert offered by Vizgen, Dr. James Kearn. The parties should be prepared to discuss at the final pretrial conference how the introduction of Kearn's testimony—which Harvard has not challenged via a *Daubert* motion—impacts the admissibility of Eisenberg's testimony.

B. 10x and Harvard's motions

Vizgen's counterclaim against 10x and Harvard includes twenty remaining counts. Count 1 is a claim against Harvard for breach of an implied covenant of good faith and fair dealing. Count 4 is a claim against 10x for tortious interference with contract and advantageous business relations. Counts 5 and 21 are claims under a Massachusetts statute. Counts 17 and 18 are federal antitrust claims. Counts 19 and 20 are claims under a California statute. 10x and Harvard have moved for summary judgment on all of these claims. Counts 6 through 15 are declaratory judgment claims alleging non-infringement and invalidity of the patents-in-suit and are not challenged on summary judgment. The Court addresses the remaining claims below.

1. Conspiracy to monopolize (Count 17)

Count 17 of Vizgen's counterclaim is a claim against 10x and Harvard for conspiracy to monopolize. To establish a conspiracy to monopolize, a party must show: (1) an agreement to monopolize between two or more actors; (2) an overt act; (3) specific intent to monopolize; and (4) a causal connection between the conspiracy and the injury alleged. *See Howard Hess Dental Lab's Inc. v. Dentsply Int'l Inc.*, 602 F.3d 237, 253 (3d Cir. 2010). An antitrust plaintiff must also establish “antitrust injury,” namely “injury of the type the antitrust laws were intended to prevent and that flows from that which makes [the antitrust] defendants' acts unlawful.” *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 489 (1977). 10x and Harvard contend that Vizgen cannot satisfy the first and third elements and also cannot establish antitrust injury. Because the Court concludes that Vizgen's conspiracy claim fails on the first element, it need not address 10x and Harvard's other points.

***11** To satisfy the first element, an agreement to monopolize, the antitrust plaintiff (here Vizgen) must establish that the alleged conspirators had “a unity of purpose or a common design and understanding, or a meeting of the minds in an unlawful arrangement.” *Am. Tobacco Co. v. United States*, 328 U.S. 781, 810 (1946). “No formal agreement is necessary to constitute an unlawful conspiracy.” *Id.* at 809. A party must present either direct or circumstantial evidence that “reasonably tends to prove that the [defendant] and others had a conscious commitment to a common scheme designed to achieve an unlawful objective.” *Monsanto Co. v. Spray-Rite Serv. Corp.*, 465 U.S. 752, 768 (1984).

Vizgen's contention was and is that the unlawful conspiracy involved what it describes as an “open early, closed late” scheme. Simplified somewhat, Vizgen contends that Harvard lured Vizgen in with assurances of freedom to operate (the “open early” aspect) but later, at the behest of 10x and in return for handsome financial rewards, clamped the jaws down by expanding the field of ReadCoor/10x's exclusive license, knowing full well that this would close out Vizgen and subject it to liability for patent infringement.

That's a viable legal theory, which is why Vizgen's antitrust claims survived a motion to dismiss. But now we are at the stage of determining whether there is sufficient evidence to permit the claims to go to trial. At this point, articulating a viable theory supported by allegations in a counterclaim is not enough. Rather, there has to be evidence that would permit a reasonable jury to find that Vizgen satisfies each of the elements of its claims.

The problem with establishing a conspiracy, from a proof standpoint, starts with the fact that 10x wasn't around for the “open early” part of the alleged scheme. And that's critical. The “closed late” aspect simply involved the obtaining, and the expansion,

of an exclusive patent license for ReadCoor/10x. But a patent confers a *lawful* monopoly, and there's likewise nothing illegal about granting or obtaining an exclusive patent license—thereby transferring to another (in this case, ReadCoor/10x) the ability to practice the lawful monopoly. That's why the existence of an unlawful scheme depends on proof of the “open early” aspect. That was the case, for example, in *Arista Networks, Inc. v. Cisco Systems, Inc.*, a case relied upon by Vizgen as establishing the illegality of an open early, closed late scheme. In that case, the plaintiff alleged that Cisco encouraged customers and competitors to use certain standardized technology it had developed for operating network routers and switches but then, once everyone was in the door, reversed course and engaged in conduct to hinder competition in order to monopolize the Ethernet switches market. *See id.*, No. 16-CV-00923-BLF, 2018 WL 11230167, at *2 (N.D. Cal. May 21, 2018). In other words, Cisco was claimed to have both opened the door early and to have closed it later on, once it had lured everyone in.

That's not the case here, at least not with respect to 10x. 10x was in no way involved when Harvard allegedly executed the “open early” aspect of the scheme. Without this, Vizgen cannot prove a “conscious commitment” on 10x's part to achieving an *unlawful* objective—because the “open early” aspect is critical to the contention that the later “closing” was unlawful.

ReadCoor was on the scene at the earlier stages, and 10x is at least arguably ReadCoor's successor in interest. But Vizgen offers no viable basis for hanging the “open early” part of the scheme around ReadCoor's (and thus 10x's) neck. It was Harvard, not ReadCoor, that is claimed to have represented to Vizgen that the license on certain patents that it was getting from Harvard did not conflict with any other existing licenses that Harvard had granted to anyone else. It is certainly true, as Vizgen points out, that ReadCoor was founded and partly owned by Dr. Church, the inventor of the Church patents that are at issue in this case. But there is no evidence that Church or ReadCoor was involved in any way, shape, or form in making the representations to Vizgen that are the underpinnings of the “open early” part of the claimed scheme, and no viable argument that those representations, or those in Harvard's NIH grant application, may be imputed to 10x.

*12 In sum, it cannot be said, based on the evidence before the Court, that 10x had, as required, “a conscious commitment to a common scheme designed to achieve an unlawful objective.” *Monsanto*, 465 U.S. at 768. Rather, the evidence with regard to 10x is that its commitment was to the *lawful* objective of obtaining, and enforcing, an exclusive patent license within a particular field. On this point, Vizgen cites evidence indicating that 10x's goal was to occupy the field for itself and keep others out. Of course it was; that's what the lawful monopoly conferred by a patent is all about. *See SCM Corp. v. Xerox Corp.*, 645 F.2d 1195, 1206 (2d Cir. 1981) (a patent owner does not violate the antitrust laws by exercising its patent rights and achieving commercial success). 10x's aim, in seeking and obtaining the expanded field for its exclusive license, to capture the market for itself and drive others out does not make it a party to an *unlawful* agreement with Harvard. “All lawful competition aims to defeat and drive out competitors.” *Great Escape, Inc. v. Union City Body Co.*, 791 F.2d 532, 541 (7th Cir. 1986).

Because a conspiracy, by definition, requires more than one participant, Vizgen's inability to establish that 10x had a conscious commitment, along with Harvard, to an *unlawful* scheme is fatal to its claim for conspiracy to monopolize. The Court thus need not address 10x and Harvard's remaining arguments regarding the conspiracy claim. 10x and Harvard are entitled to summary judgment on Count 17.

2. Attempt to monopolize (Count 18)

Count 18 of Vizgen's counterclaim is a claim against 10x for attempted monopolization.¹ “A claim of attempted monopolization under § 2 of the Sherman Act must allege (1) that the defendant has engaged in predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power.” *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 317 (3d Cir. 2007). 10x argues that Vizgen cannot establish any of these elements.

Vizgen appears to contend that it can satisfy the first element—predatory or anticompetitive conduct—via either the “open early, closed late” conduct discussed in the previous section or via proof that Vizgen engaged in predatory pricing and unlawful bundling of products. The “open early, closed late” theory fails with respect to 10x, for the reasons just discussed. The Court therefore confines its discussion to Vizgen's contentions that 10x has engaged in predatory pricing and unlawful bundling.

a. Predatory pricing

The parties agree that to prove predatory pricing, Vizgen must establish that the prices complained of are below an appropriate measure of 10x's costs and that 10x has a dangerous probability of recouping its investment in below-cost prices. *See* Pl. 10x's Opening Br. in Supp. of Mot. for Summ. J. at 14–15; Vizgen's Omnibus Answering Br. in Opp. to Mot. for Summ. J. at 24 (both citing *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 222, 224 (1993)). Vizgen's claim founders on the first of these elements, so the Court need not consider the second.

10x sells both Xenium instruments and the “consumables” that are used in operating them. The consumables are proprietary: the Xenium only works with 10x's consumables, and the MERSCOPE only works with Vizgen's consumables. The evidence shows—both sides agree on this—that 10x is selling Xenium instruments below its cost. *See* Pl. 10x's Opening Br. in Supp. of Mot. for Summ. J. at 15; Vizgen's Omnibus Answering Br. in Opp. to Mot. for Summ. J. at 24–25. But the evidence also establishes that if one considers the instruments and consumables together, 10x is not pricing below cost. 10x's expert Dr. Israel's analysis shows this, and Vizgen does not dispute the accuracy of that analysis. Pl. 10x's Opening Br. in Supp. of Mot. for Summ. J. at 16; *see also* Vizgen's Omnibus Answering Br. in Opp. to Mot. for Summ. J. at 24–26 (challenging Israel's opinion regarding Vizgen's ability to price its own instruments below cost in response to 10x's pricing but not challenging Israel's analysis that “instruments and consumables are properly analyzed together” (quoting Pl. 10x's Opening Br. in Supp. of Mot. for Summ. J. at 15)). Vizgen's expert Dr. Kearl did not do a countervailing instrument-plus-consumables analysis, and during his deposition he did not dispute that when consumables are taken into account, 10x is not selling Xenium below cost over the instrument's life. Pl. 10x's Opening Br. in Supp. of Mot. for Summ. J., Ex. 53 at 92:12–17; 149:24–15. In short, there is no genuine factual dispute on this point. Instead, the dispute is over whether it is appropriate to consider consumables in assessing the issue of predatory pricing.

***13** On that point the law favors 10x. A seller's expected return rationally includes both the initial purchase and the sales of consumables that will follow—in this case, that inevitably will follow. *See, e.g., Stitt Spark Plug Co. v. Champion Spark Plug Co.*, 840 F.2d 1253, 1255–56 (5th Cir. 1988); *Kentmaster Mfg. Co. v. Jarvis Prods. Corp.*, 146 F.3d 691, 694 (9th Cir. 1988) (no predatory pricing where the defendant used sales of spare parts unique to its brand and required over the equipment's useful life to recoup low prices on equipment). In this case, the instruments will not operate without the consumables, so it is appropriate to consider them together in assessing whether 10x's pricing is predatory. In the Court's view, no reasonable jury could find otherwise.

For these reasons, Vizgen's claim of predatory pricing fails.

b. Unlawful bundling

Vizgen also contends that 10x engages in anticompetitive conduct by offering “bundled” sales of different instruments—Xenium in the SST market, Chromium in the market for [single cell analysis](#) tools, and Visium in the market for low-resolution spatial analysis—and offering purchasers a discount if they buy more than one. Vizgen contends that with only one instrument, MERSCOPE, it cannot offer anything comparable.

A claim of unlawful bundling requires the claimant to establish that the accused party conditioned the granting of discounts on the relevant product on customers' purchase of other products, in order to use market power in one market to exclude competition in another. *LePage's Inc. v. 3M*, 324 F.3d 141, 155–57 (3d Cir. 2003). “The principal anticompetitive effect of bundled rebates ... is that when offered by a monopolist they may foreclose portions of the market to a potential competitor who does not manufacture an equally diverse group of products and who therefore cannot make a comparable offer.” *Id.* at 155.

Vizgen attempts to establish that 10x's bundling has anticompetitive effects by using a standard called the “discount attribution test.” *See, e.g., Cascade Health Sols. v. PeaceHealth*, 515 F.3d 883, 906 (9th Cir. 2008). *Cascade Health Solutions* describes the test as follows:

Under this standard, the full amount of the discounts given by the defendant on the bundle are allocated to the competitive product or products. If the resulting price of the competitive product or products is below the defendant's incremental cost to produce them, the trier of fact may find that the bundled discount is exclusionary for the purpose of § 2. This standard makes the defendant's bundled discounts legal unless the discounts have the potential to exclude a *hypothetical* equally efficient producer of the competitive product.

Id. (footnote omitted). Vizgen's expert Dr. Kearl has applied this test and concludes that 10x's bundles have the potential for anticompetitive effect.

10x argues, among other things, that Kearl's testimony is insufficient to show an anticompetitive effect sufficient to establish an attempted monopolization claim. It contends that the discount attribution test does not apply in the Third Circuit and that instead, under *LePage's*, Vizgen is required to show that 10x's bundling practices caused actual foreclosure from the SST market. 10x argues that Vizgen cannot show this, because: (a) only a small proportion of Xeniums were sold in bundles, and when they were, the discount was very small; (b) when Vizgen lost sales to Xenium, it generally happened for reasons unrelated to bundling; (c) 10x did not engage in coercive behavior relating to bundled sales, so it did not foreclose Vizgen from the market; and (d) Vizgen is able to make comparable offers, as it markets MERSCOPE in the other markets and partners with another entity that sells instruments for [single-cell analysis](#). See Pl. 10x's Opening Br. in Supp. of Mot. for Summ. J. at 18–20.

***14** The sufficiency of the evidence supporting Vizgen's unlawful bundling claim is a much closer call than its predatory pricing claim, partly because assessment of the claim turns on determination of the applicable standard in the Third Circuit. The Court is inclined to agree with Vizgen on this point: 10x's argument that actual foreclosing is required seems to the Court to blur the distinction between a claim of monopolization (as in *LePage's*, where the defendant, 3M, possessed monopoly power and was accused of anticompetitive efforts to maintain it) and a claim of attempted monopolization, which is what Vizgen is asserting. But ultimately this does not matter, because Vizgen's attempted monopolization claim founders on the third element, specifically, the requirement to prove a dangerous probability of attaining monopoly power. On this element, in response to 10x's motion, Vizgen's sole argument is that if 10x prevails on its patent infringement suits against 10x and NanoString and gets injunctive relief, it will end up with ninety-five percent of the SST instrument market. Vizgen's Omnibus Answering Br. in Opp. to Mot. for Summ. J. at 33–34. That argument misses the mark. Prevailing on the patent infringement claims would, as 10x correctly contends, leave it with a *lawful* monopoly within the scope of the patents. That's not the same as evidence that predatory or anticompetitive conduct will enable Vizgen to attain monopoly power.

For these reasons, the Court grants summary judgment against Vizgen on Count 18.

3. Breach of implied covenant of good faith and fair dealing (Count 1)

In Count 1 of Vizgen's counterclaim, it asserts a claim against Harvard for breach of the implied covenant of good faith and fair dealing. It contends that Harvard “destroyed the fruits of Vizgen's license agreement” by encouraging Vizgen's commercialization efforts and collecting royalties but then knowingly creating (in 2020) a conflict between ReadCoor and Vizgen's licenses in return for greater financial rewards. See *id.* at 53. Harvard contends that what it calls Vizgen's “bad faith licensing theory” is legally and factually infirm.

Under Massachusetts law, every contract includes an implied covenant of good faith and fair dealing. [Anthony's Pier Four, Inc. v. HBC Assocs.](#), 411 Mass. 451, 473, 583 N.E.2d 806, 821 (1991). “The covenant provides that neither party shall do anything that will have the effect of destroying or injuring the rights of the other party to receive the fruits of the contract.” *Id.* at 471, 583 N.E.2d at 820. To survive summary judgment, Vizgen must put forth evidence that would permit a reasonable jury to find

that Harvard “acted with ... dishonest purpose of conscious wrongdoing necessary for a finding of bad faith or unfair dealing.” *Schultz v. Rhode Island Hosp. Tr. Nat’l Bank, N.A.*, 94 F.3d 721, 730 (1st Cir. 1996).

Vizgen points to evidence indicating that, initially, Harvard entered into a license with Vizgen for certain patents understanding that Vizgen would use the license to commercialize its MERSCOPE product, and encouraging Vizgen to do exactly that. Later, in 2020, when ReadCoor sought to broaden its field definition for the Church patents, Harvard initially rejected ReadCoor’s proposal due to a concern that it would risk litigation with other Harvard start-ups—Vizgen in particular. After a series of discussions, however, Harvard changed this position and accepted ReadCoor’s proposed amendment in full. Despite initially seeking a covenant by ReadCoor not to sue Vizgen, Harvard ultimately gave in on that and also agreed to a joinder provision requiring Harvard to join an infringement suit brought by ReadCoor. Harvard did all of this, Vizgen says, knowing that ReadCoor’s expanded field definition would subject Vizgen to an infringement suit by ReadCoor/10x.

Harvard argues that there is no viable contention that it assured Vizgen that it had freedom to operate with respect to its MERSCOPE project. But the Harvard-Vizgen license agreement included a representation by Harvard to the effect that to the best of OTD’s knowledge, the Vizgen license did not conflict with any other intellectual property license that Harvard had granted to anyone else. Pl. 10x’s Opening Br. in Supp. of Mot. for Summ. J., Ex. 43 § 8.2(d). Another provision in the agreement stated that Harvard was making no representation that the development, making, sale, or use of any licensed product would not infringe anyone else’s patents. *Id.*, Ex. 43 § 8.3.2. But that did not wipe the “no conflicting licenses” representation out of existence.

***15** Harvard also contends that the evidence does not support a contention that it had awareness when it entered into the license with Vizgen that Vizgen might infringe the Church patents that Harvard licensed to ReadCoor/10x.² Rather, it says, it was up to Vizgen to figure that out on its own—and it had the financial and personnel wherewithal to do so. And indeed the aforementioned section 8.2(d) of the license agreement stated that Harvard’s representation of the absence of a conflict with any other license was based “to the best of the knowledge of OTD, *and, without any further investigation*” *Id.*, Ex. 43 § 8.2(d) (emphasis added).

So far, so good (perhaps) for Harvard. But its motion does not adequately engage with the key contention supporting Vizgen’s breach-of-good-faith claim, which is that Harvard’s *later* conduct vis-à-vis ReadCoor effectively destroyed the value of Vizgen’s license. There is evidence, *see* Vizgen’s Omnibus Answering Br. in Opp. to Mot. for Summ. J. at 44–45, that would permit a finding that when Harvard agreed to expand ReadCoor’s field of use in 2020—an expansion that connects, with a direct line, to 10x and Harvard’s filing of the present patent infringement lawsuit—it knew or at least was on notice that the field-of-use expansion would put Vizgen on a collision course with ReadCoor, which shortly thereafter became 10x. The evidence further reflects that although Harvard—recognizing the conflict—initially sought to prevent a lawsuit by seeking a covenant by ReadCoor not to sue, it folded on that point when ReadCoor objected, and did so at least arguably based on ReadCoor’s dangling of a significant financial reward. *See* Vizgen’s Omnibus Answering Br. in Opp. to Mot. for Summ. J. at 45; *id.*, Ex. 29 at 234:3–234:12 (deposition testimony of Grant Zimmerman, Harvard’s Director of Business Development for ReadCoor, stating that Harvard accepted “word for word” language for an expanded field definition provided by ReadCoor CEO Rich Terry); Pl. 10x’s Opening Br. in Supp. of Mot. for Summ. J., Ex. 24 (e-mail from Rich Terry to Harvard OTD’s Isaac Kohlberg stating that “ReadCoor has a large transaction pending” which will be “a tremendous success for Harvard OTD” and attaching a proposed amendment to the field definition). Indeed, the final version of the Harvard-ReadCoor agreement contained a joinder provision requiring Harvard “to join as a co-plaintiff ... in any enforcement action by [ReadCoor] with respect to any Infringement, provided that [ReadCoor] shall not name Harvard as the first named plaintiff or defendant party in such action,” Pl. 10x’s Opening Br. in Supp. of Mot. for Summ. J., Ex. 29 § 7.7, which at least partly explains why Harvard is on the opposite side of this lawsuit from Vizgen, its licensee. And Harvard then supported a continuation-in-part patent application that arguably sealed the deal in terms of putting MERFISH in 10x’s crosshairs. There may not have been anything wrong with this application in and of itself, but it is part of the chain of events that would permit a reasonable jury to find that Harvard consciously took actions that had the effect of destroying or injuring Vizgen’s rights under its license with Harvard and did so with a dishonest purpose.

For these reasons, Harvard is not entitled to summary judgment on Count 1.

4. Tortious interference (Count 4)

In Count 4 of the counterclaim, Vizgen alleges that 10x wrongfully interfered with the Vizgen-Harvard license agreement and with Vizgen's relationships with certain customers. The latter aspect of this claim is predicated on allegedly predatory discounts that 10x offered to certain customers to switch from Vizgen to 10x. As Vizgen accurately points out in its response brief, 10x's motion does not address this point at all (and, for that matter, neither does its reply even though, by then, Vizgen had pointed out the earlier omission). So the tortious interference claim survives to that extent.

***16** The primary focus of Count 4 involves ReadCoor/10x's inducement of the alleged breach of good faith and fair dealing just discussed with respect to Count 1. On this, 10x argues that there is no evidence that it was aware of any of the terms of Vizgen's license. That's a non-starter, as there is evidence, relating to the ReadCoor-Harvard negotiations in 2020, that ReadCoor was aware that its requested field expansion would bring MERFISH into conflict with ReadCoor's rights under the Church patents. *See, e.g.,* Vizgen's Omnibus Answering Br. in Opp. to Mot. for Summ. J., Ex. 29 at 145:6–146:1 (deposition of Zimmerman stating that Rich Terry “was upset that Vizgen had an all-fields license whereas ReadCoor has this very convoluted four-field license”). The evidence cited by Vizgen would be sufficient to permit a reasonable jury to find that ReadCoor knew the 2020 deal could be understood as undermining Vizgen's license.

This aspect of Count 4 fails, however, on the requirement of improper motive or means, which is an element of a tortious interference claim under Massachusetts law. *See Psy-Ed Corp. v. Klein*, 459 Mass. 697, 715, 947 N.E.2d 520, 536 (2011). “Improper means” requires conduct that is “innately wrongful [and] predatory in character, deceitful, or involving threats, misrepresentation, or defamation”; urging a party to breach a contract is insufficient. *Cutting Edge Homes, Inc. v. Mayer*, 229 N.E.3d 613, 617 (Mass. App. Ct. 2024) (cleaned up). And “improper motive” requires the claimant to show “an intent specifically to harm the plaintiff, *unrelated to any legitimate business purpose.*” *Id.* at 619 (emphasis added). Vizgen has not pointed to evidence that would permit a reasonable jury to find either of these requirements to be met. There is no viable contention regarding any misrepresentation, deceit, or other wrongful conduct by ReadCoor/10x in connection with the field-of-use expansion or its ensuing patent prosecution and enforcement efforts. And the evidence is clear that ReadCoor/10x acted in furtherance of a desire to fully exploit the patent rights licensed from Harvard, which amounts to a legitimate business purpose.

For these reasons, the only aspect of Count 4 that survives summary judgment is the claim of tortious interference with advantageous business relations arising from 10x's discounting practices vis-à-vis certain Vizgen customers.

5. State statutory claims (Counts 5, 19, 20, and 21)

Vizgen also asserts claims under Massachusetts General Laws chapter 93A (Counts 5 and 21) and two California statutes (Counts 19 and 20). Vizgen does not defend the California statutory claims in its response to 10x's motion for summary judgment other than by stating that they should survive if the antitrust claims do. Because the Court has granted summary judgment on the antitrust claims, it likewise dismisses California statutory claims. This leaves Vizgen's claims under Massachusetts chapter 93A.

Chapter 93A makes unlawful unfair or deceptive acts or practices in trade or commerce. It covers conduct that is “(1) within the penumbra of a common law, statutory, or other established concept of unfairness; (2) immoral, unethical, oppressive, or unscrupulous; or (3) causes substantial injury to competitors or other business people.” *Connor v. Marriott Int'l, Inc.*, 103 Mass. App. Ct. 828, 835, 231 N.E.3d 375, 382 (2024). A claimant under 93A is not required to establish reliance on a representation by the defendant, but it must prove a causal connection between the unfair or deceptive conduct and an injury. *See Hershenow v. Enter. Rent-A-Car Co. of Bos., Inc.*, 445 Mass. 790, 800 n.20, 840 N.E.2d 526, 534 n.20 (2006).

Vizgen asserts two separate 93A claims. The first, Count 5, essentially tracks Vizgen's good faith and fair dealing claim against Harvard (Count 1) and its tortious interference claim against 10x as it relates to the Harvard-Vizgen license (Count 4). Vizgen's Omnibus Answering Br. in Opp. to Mot. for Summ. J. at 42 (“Count V[] encompasses Harvard and 10x's unfair and

deceptive conduct including: Harvard's bait-and-switch licensing tactics; Harvard and 10x's unfair targeting of Vizgen, including expanding ReadCoor's field of use to cover Vizgen; and Harvard and 10x's patent prosecution efforts to ensnare Vizgen.”). This claim survives summary judgment, but only to the extent the underlying claims survive. Vizgen argues that a 93A claim is broader than a related common law tort claim, but it does not explain in its brief how any such differences permit its 93A claim against 10x concerning interference with the Harvard-Vizgen license to withstand summary judgment when the underlying tort claim did not. Thus Harvard is not entitled to summary judgment on Count 5, but 10x is.

***17** Vizgen characterizes its second 93A claim, Count 21, as follows: it is “directed to 93A violations in connection with Harvard's promises to the NIH that it would nonexclusively license patents and technology arising from a \$19 million grant.” *Id.* at 48. In seeking summary judgment, Harvard argues that: its grant application to the NIH did not create a binding contract; federal law, specifically a statute called the Bayh-Dole Act, [35 U.S.C. § 200](#), limits a grantee's ability to place limits on its right to grant exclusive licenses on any resulting patents; and at most Harvard's grant application and award required it only “to try” to “pursue” non-exclusive licenses, which Harvard says it did. *See* Opening Br. in Supp. of Harvard's Mot. for Summ. J. at 13–16. Notably, Harvard does *not* argue that Vizgen is unable to establish the causal nexus required to sustain a 93A claim.

Harvard has not shown that it is entitled to summary judgment on this claim. First, it cites no law holding that 93A liability turns on whether there was an enforceable contract regarding its licensing activity. Second, it is debatable whether the Bayh-Dole Act actually imposes the limits that Harvard suggests. And Harvard's remaining contentions turn on facts and inferences that are genuinely disputed.

The Court questions whether, even if Vizgen can support its contention that Harvard breached promises it made to get NIH grant money, this actually adds up to a 93A violation. Even if Harvard's claimed promises ripened into a binding contract with the government, the law under 93A is clear that a simple breach of contract does not amount to a statutory violation; the accused party's conduct must also be “extreme” or “egregious.” *See, e.g., Anoush Cab, Inc. v. Uber Techs., Inc.*, 8 F.4th 1, 17–18 (1st Cir. 2021) (collecting cases). The Court questions whether Vizgen can muster evidence that would suggest anything beyond a simple failure by Harvard to live up to its promises to the NIH. But Harvard has not moved for summary judgment on that basis, so resolution of any such argument will have to await the trial.

There is no viable basis, however, to impose liability on 10x on this claim. The claim is focused on Harvard's conduct. In its brief in response to summary judgment, Vizgen makes a somewhat half-hearted effort to establish a link to 10x. *See* Vizgen's Omnibus Answering Br. in Opp. to Mot. for Summ. J. at 52. It seems to argue that because Church and ReadCoor were involved in getting an exclusive license to the Church patents, that's sufficient to tie 10x into Harvard's chapter 93A violation. That's a non-starter; Vizgen cites no evidence to support the proposition that anything unscrupulous or underhanded—either then or later—is properly imputed to 10x.

For these reasons, Harvard is not entitled to summary judgment on Count 21, but 10x is.

Conclusion

For the reasons stated above, the Court denies Vizgen's motion for summary judgment and to exclude expert testimony in its entirety, with the exception of its motion to exclude the testimony of Professor Eisenberg. The Court grants 10x's motion for summary judgment regarding Vizgen's counterclaim in its entirety, except with respect to part of Count 4 as more fully described above. The Court grants Harvard's motion for summary judgment with respect to counts 17, 19, and 20 of Vizgen's counterclaim, but denies Harvard's motion for counts 1, 5, and 21.

All Citations

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Footnotes

- 1 *See* Vizgen's Omnibus Answering Br. in Opp. to Mot. for Summ. J. at 20 (“Vizgen Count XVIII asserts 10x is liable for Attempted Monopolization in Violation of [15 U.S.C. § 2](#).”).
- 2 The Court makes no judgment on the sufficiency of the evidence supporting Vizgen's contention on this point; it's essentially a non-issue given the Court's resolution of the summary judgment motion as to Count 1.

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